SYSTEM AND METHOD FOR ARCHIVING AND OUTPUTTING DOCUMENTS OR GRAPHICAL ITEMS

This application is a utility application claiming the benefit of the earlier filing date of provisional application Serial No. 60/240,179 filed October 13, 2000.

Field of the Invention:

The invention pertains to digital asset management systems including the processing and archiving of files. More particularly, the invention pertains to processing to form object-oriented representations of files received in a standardized format. The object oriented representations can be graphically manipulated and then entered into an archival data base with minimal redundancy and with relationships maintained among the elements of the item for subsequent retrieval, editing, recompiling and outputting the file.

Background of the Invention:

To the largest extent the prevailing paradigm for electronic document creation, editing and archiving is rooted in perspectives established long ago for hard-copy documents. In today's digital asset management systems, numerous documents containing multiple instances of redundant document elements are the convention. Although these redundant elements may involve relatively minor property variations dealing with such associated characteristics as size and position in the document, the instances of basic element redundancy contributes to gross inefficiencies in the storage and use of documents in a digital archive.

Among the inefficiencies created by this paradigm and the digital document archiving capabilities driven by it is the unnecessarily large memory capacity requirements and subsequent costs for the devices and systems involved with document archiving. Another inefficiency of this paradigm involves the gross redundancy and menial work-effort, along with the associated unnecessary execution time and cost involved with editing or replacing multiple instances of common graphic elements present in large numbers of documents within an archive.

Associated with the hard-copy based paradigm that unnecessarily encumbers the efficient document use and archiving mentioned above is a similarly constraining and longstanding paradigm, which addresses the work processes and methods involved with converting documents for mass reproduction of as a work-in-turn, custom-manufacturing process. In this paradigm, over time the same reproduction-related preparation tasks are executed over and over again to the same basic elements, which are part of multiple documents prepared for reproduction. Because of the document archiving systems that are driven by this paradigm, those involved with the preparation of documents for mass production reproduction are unable to take advantage of the opportunities of a components-based manufacturing approach that are made possible by the methods, devices and processes of the invention.

One instance of the above noted problem arises where documents or graphical items from different sources are to be integrated into a single archive, and, have common elements added to various of the documents or graphical items, which have heretofore not existed. One example grows out of acquisition or merger activities wherein multiple companies combine and wish to revise existing documents, which have different corporate identities, to exhibit the new common corporate identity going forward. Such documents would include, without limitation, advertisements, manuals, brochures, letterheads, and other documents or graphical items which would be used in the normal course of corporate business activities.

With respect to combining groups of documents or graphical items from disparate sources into a single common archive going forward, it would be desirable to be able to efficiently and cost effectively manipulate certain kinds of symbols and wording. For example, inserting the new corporate logo and/or corporate name in the existing archiving data base, originated from two different companies, so that new copies of the documents or graphical items reflect the up-dated corporate logo and name. This capability would be particularly useful for product related documentation to be distributed by the new entity.

The execution of pre-print production work in connection with graphics documents is another instance where known systems and approaches incorporate less than optimal solutions in connection with maintaining data bases for a variety of product packaging graphical items and the like. In this instance, the tasks necessary to prepare art work for mass production printing are usually repeated over and over for each document that is to be printed. However, multiple documents in company graphics archives often have numerous graphic elements in common. The one-two-one relationship between graphic documents and the graphic elements contained in these documents is often the same between documents. Storage of redundant common graphics elements leads to inefficiencies and increased costs. Known asset management systems used in the graphics arts industry do not address this inefficiency in the storage of graphic documents or elements.

There thus continues to be a need for asset and content management systems for managing large archival data bases of linked documents or graphical items with minimal redundancy. Preferably, such data bases could be configured to incorporate a variety of new documents and/or graphical items in a way which is consistent with standards associated with pre-existing documents or graphical items and which can link common elements of later-entered documents or graphical items to pre-existing common elements. It would also be desirable if either on an item-by-item basis or an exception basis a user could graphically review a representation of newly entered items for purposes of control and consistency. Finally it would promote efficiency to be able to manage content on a one-to-many basis within the asset management environment.

Summary of the Invention:

An asset and content management system in accordance with the invention translates multiple documents and document components to and from an object-oriented archive having managed singular and unique document-related objects and relationships. These objects and relationships can be modified and utilized in various combinations, via multiple methods so as to achieve object integrity as well as one-to-many modification and concurrent updating of the archive.